PATENT COOPERATION TREATY

PCT

TRANSLATION INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

ICR0001 FOR FURTHER ACTION See Form PCT/IPEA/416	See Form PCT/IPEA/416						
International application No. PCT/JP2004/001614 International filing date (day/month/year) 16.02.2004 Priority date (day/month/year)							
International Patent Classification (IPC) or national classification and IPC C07K14/79, C07K7/06, C07K7/08, C07K1/26, C07K1/34, C07K1/22, C12P21/06, A61K38/40, A61K38/08, A61K38/10, A61P37/00							
Applicant KOMINE, Kenichi							
1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.							
2. This REPORT consists of a total of sheets, including this cover sheet.							
3. This report is also accompanied by ANNEXES, comprising:							
a. (sent to the applicant and to the International Bureau) a total of 2 sheets, as follo	ws:						
sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).							
sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.							
b. (sent to the International Bureau only) a total of (indicate type and number of electronic carrier(s))							
, containing a sequence listing and/or	tables						
related thereto, in computer readable form only, as indicated in the Supplemental Box Relating to Sequence Listi Section 802 of the Administrative Instructions).	ng (see						
4. This report contains indications relating to the following items:							
Box No. I Basis of the report							
Box No. II Priority							
Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability							
Box No. IV Lack of unity of invention							
Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement							
Box No. VI Certain documents cited							
Box No. VII Certain defects in the international application							
Box No. VIII Certain observations on the international application							
Date of submission of the demand Date of completion of this report							
Name and mailing address of the IPEA/JP Authorized officer	Authorized officer						
Facsimile No. Telephone No.	Telephone No.						

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.
PCT/JP2004/001614

Вох	No. I		Basis of the report					
1.			ard to the language, this report is based on the international application in the language in which it was filed, unless otherwise under this item.					
			report is based on translations from the original language into the following ch is the language of a translation furnished for the purposes of:					
		i	international search (Rule 12.3 and 23.1(b))					
		<u> </u>	publication of the international application (Rule 12.4)					
	international preliminary examination (Rule 55.2 and/or 55.3)							
2.	rece	With regard to the elements of the international application, this report is based on (replacement sheets which have been furnished to the ecceiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to a report:						
		the international application as originally filed/furnished						
	\boxtimes	the des	ne description:					
		pages	1-7		as originally filed/furnished			
		pages*	·	received by this Authority on				
		pages*		received by this Authority on				
	\boxtimes	the clai	ims:					
		nos.			as originally filed/furnished			
		nos.*		as amended (togethe	r with any statement) under Article 19			
		nos.*	1-3,5-15	received by this Authority on	02.02.2005			
		nos.*		received by this Authority on				
	\boxtimes	the dra	wings:					
		sheets	1/4-4/4		as originally filed/furnished			
		sheets*						
		sheets*						
		a seque	ence listing and/or any related table(s) – see Supplem	ental Box Relating to Sequence L	isting.			
3.	\boxtimes	The an	The amendments have resulted in the cancellation of:					
		t1	the description, pages					
		∑ tì	the claims, nos. 4					
			the drawings, sheets/figs					
		t	he sequence listing (specify):					
		Па	any table(s) related to sequence listing (specify):					
4.			his report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since the list have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).					
		tl	the description, pages					
		tl	the claims, nos.					
		tl	the drawings, sheets/figs					
		L ti	he sequence listing (specify):					
		а	any table(s) related to sequence listing (specify):					
*	If ite	т 4 арр.	lies, some or all of those sheets may be marked "supe	erseded."				

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

- 2. Citations and explanations (Rule 70.7)
 - Document 1: Rochard, E. et al., FEBS Lett, 1989, Vol. 255, No. 1, pages 201 to 204
 - Document 2: Bourne, Y. et al., J. Mol. Biol., 1992, Vol. 227, No. 3, pages 938 to 941
 - Document 3: Hutchens, T.W. et al., Proc. Natl. Acad. Sci.
 USA, 1991, Vol. 88, No. 8, pages 2994 to
 2998
 - Document 4: Mead, P.E. et al., Nucleic Acids Res. 1990, Vol. 18, No. 23, page 7167

The inventions set forth in claims 1, 3 and 12 lack novelty and do not involve an inventive step in the light of documents 1 and 2. Documents 1 and 2 set forth a polypeptide containing a Phe-Lys-Asp amino acid sequence with a molecular weight of less than 25kDa, obtained by fragmenting human lactoferrin with a protease.

The invention set forth in claim 12 lacks novelty and does not involve an inventive step in the light of documents 3 and 4. Documents 3 and 4 indicate that human or bovine lactoferrrin is fragmented with protease then refined, and a polypeptide containing a Phe-Lys-Asp amino acid sequence is isolated and refined.

The invention set forth in claims 14 and 15 does not

International application No.
PCT/JP2004/001614

Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

involve an inventive step in the light of documents 1 to 4. It would be easy for a person skilled in the art to determine the amino acid sequence of part of the polypeptide set forth in documents 1 to 4, and to produce a synthetic peptide from said amino acid sequence.

The inventions set forth in claims 2, 5 to 11 and 13 are not disclosed in documents 1 to 4, and are therefore novel and involve an inventive step. Documents 1 to 4 do not indicate that a polypeptide containing a Phe-Lys-Asp amino acid sequence with a molecular weight of less than 25kDa is obtained by fragmenting lactoferrin with elastase, or that said polypeptide has inflammation—inducing activity, and it would not be easy for a person skilled in the art to conceive of these features in the light of documents 1 to 4.